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# 3 Step Leadership Strategy



## 1. Enlarge Customer Base

### 2001

- Declining market share



### Today

- Industry leader in NOR



### Future

- Open up new markets

## 2. Achieve Technology Leadership

### 2001

- Late with technology



### Today

- MirrorBit™ deployed & winning



### Future

- Expand MirrorBit™ applicability

## 3. Drive Best in Class Manufacturing Cost

### 2001

- Under loaded factories



### Today

- Optimized factory load



### Future

- Achieve synergy

# Balance the Customer Base

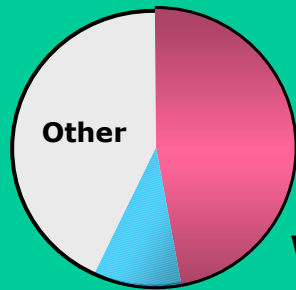
## - Revenue by Segment



### NOR Market

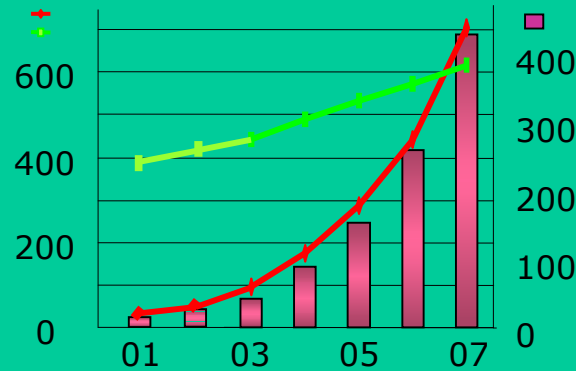
**2001**

**2003**

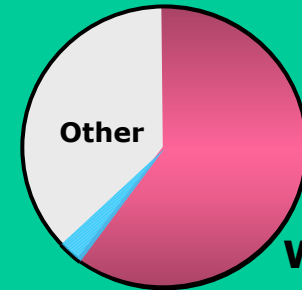


**Wireless  
47%**

**TelNet  
10%**



◆ Avg. Density/Phone (Mb)  
■ Total Phones (MU)  
■ Cellular (Petabits)



**Wireless  
60%**

**TelNet  
3%**

# Balance the Customer Base

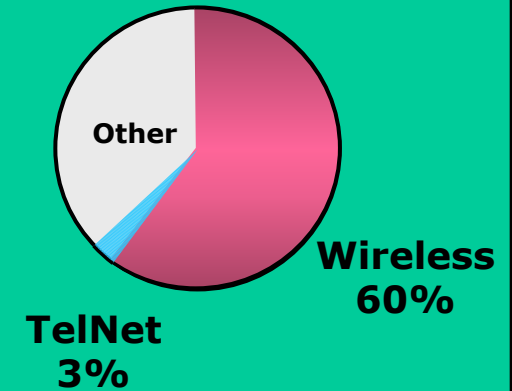
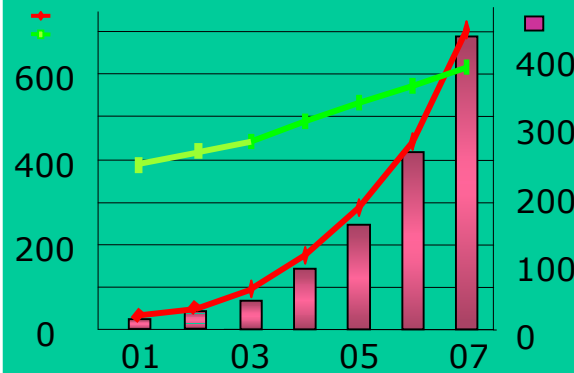
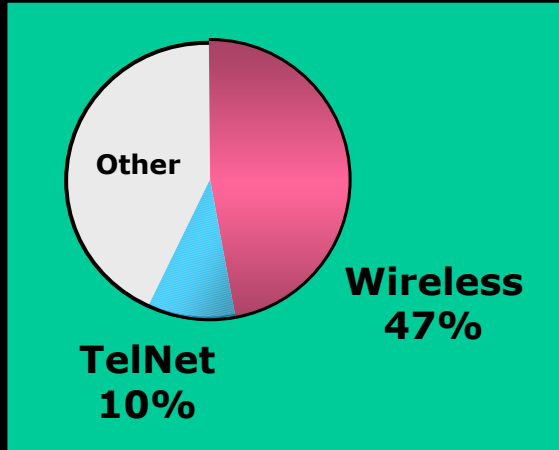
## - Revenue by Segment



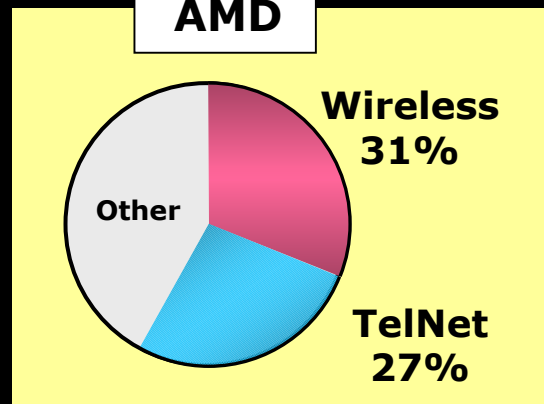
**2001**

**NOR Market**

**2003**



**AMD**



◆ Avg. Density/Phone (Mb)  
■ Total Phones (MU)  
■ Cellular (Petabits)

# Balance the Customer Base

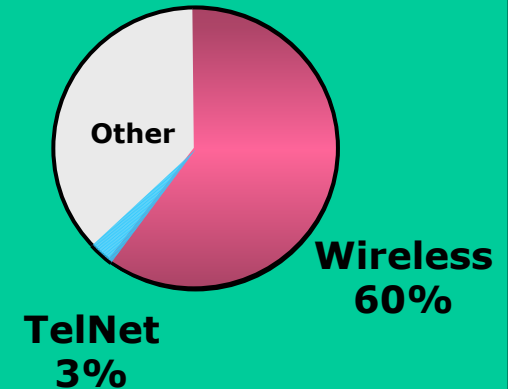
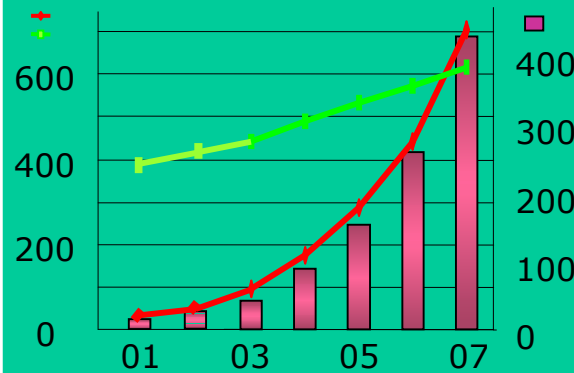
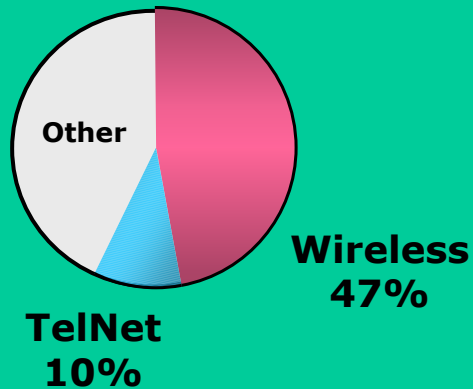
## - Revenue by Segment



**2001**

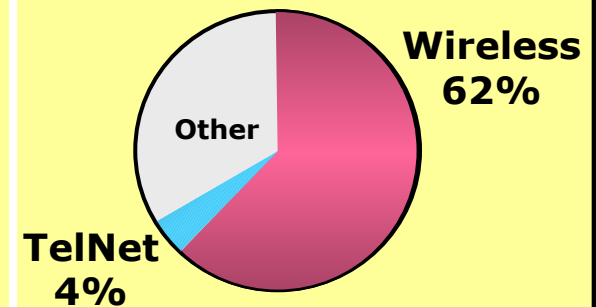
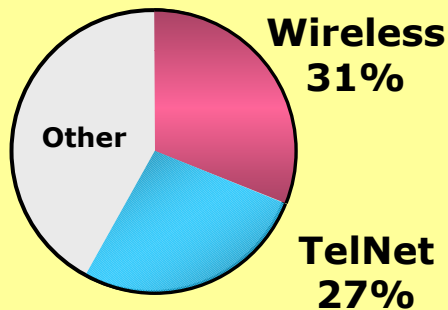
**NOR Market**

**2003**



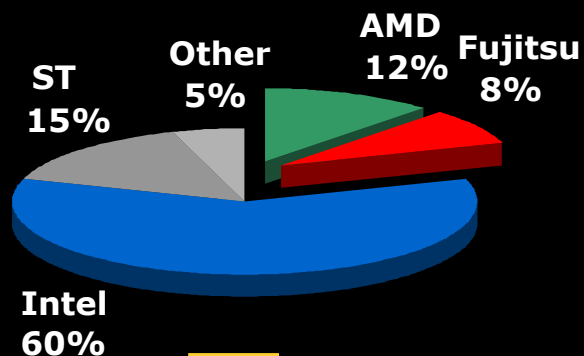
**AMD**

**AMD Spansion™**

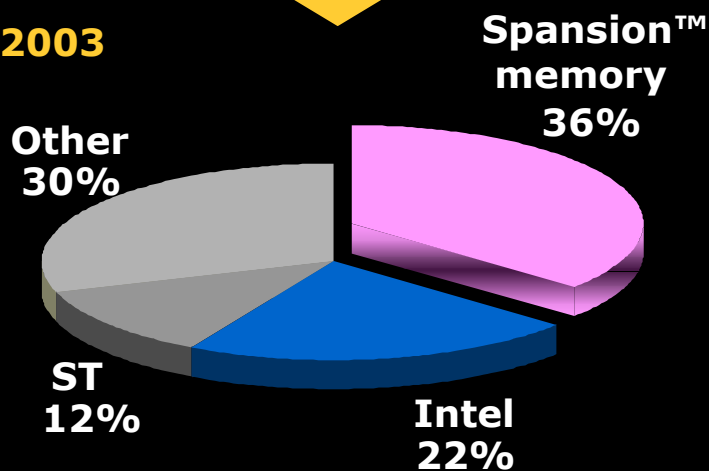


## NOR Cellular Flash Market Share

**2001**

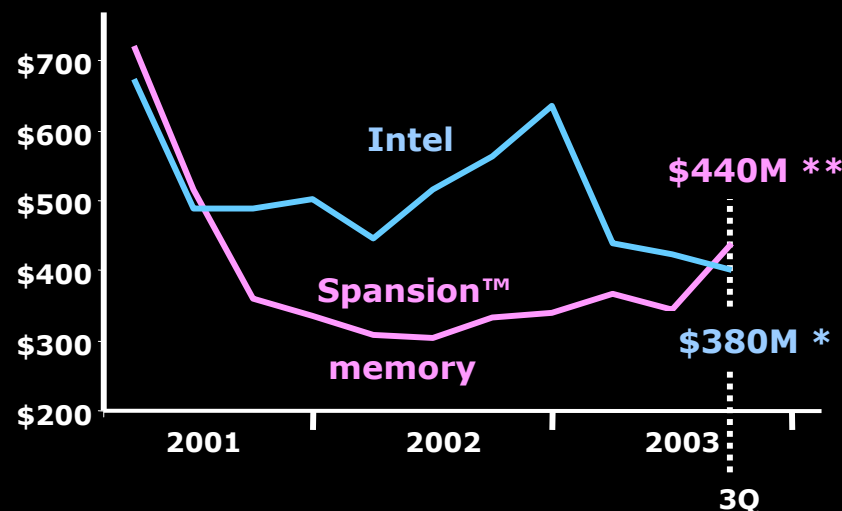


**2003**



Source:- FASL 2003 estimates

## Overall NOR Flash Revenue Trend



\*Source:- FASL 2003 estimates  
 \*\*\$440M = \$424M reported by AMD plus Fujitsu commission

# Continue Leadership in Embedded Segments

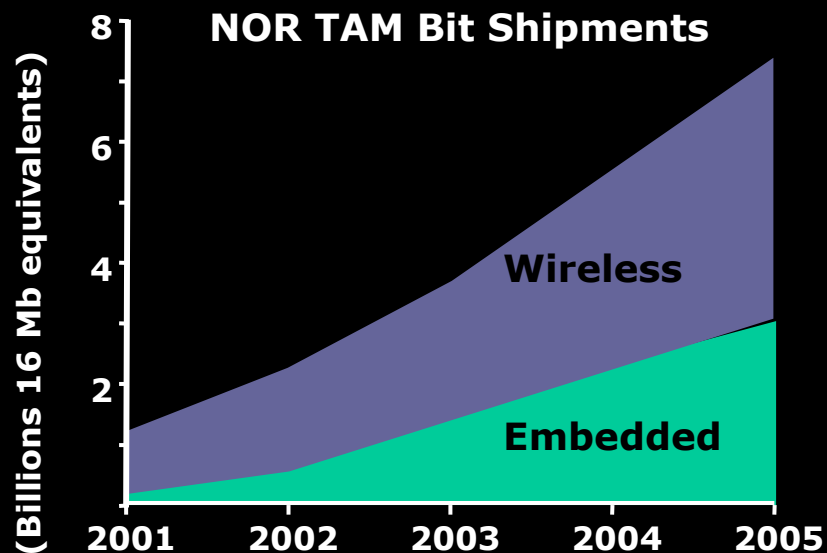


Segments	FASL Position	FASL Market Share
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**Total NOR Embedded Market Share - 2003**

**#1**

**20%**



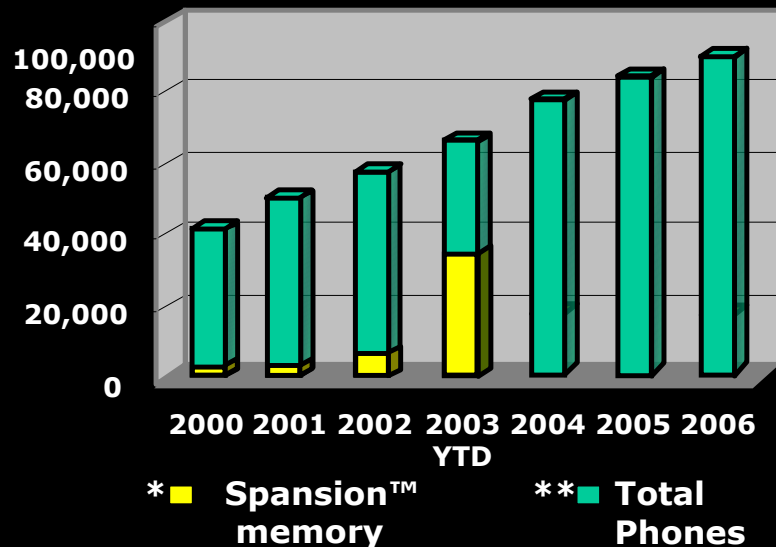
<b>DVD</b>	<b>#1</b>	<b>71%</b>
<b>Printers</b>	<b>#1</b>	<b>54%</b>
<b>Automotive</b>	<b>#1</b>	<b>52%</b>
<b>TelNet</b>	<b>#1</b>	<b>23%</b>
<b>Set Top Box</b>	<b>#3</b>	<b>16%</b>
<b>Industrial</b>	<b>#4</b>	<b>17%</b>
<b>PC/Peripheral</b>	<b>#10</b>	<b>4%</b>

# Winning Strategy in Emerging Markets



- **China customer successes**
- Designed into 7 of the top 10 wireless OEMs in China

**Mobile Terminals: China, 2002-'06\*\***



- **Share Asian Wireless Handhelds \***

	Q3-02	Q4-02	Q1-03	Q2-03	Q3-03
<b>China OEM</b>	Very Low	<10%	10% - 25%	25% - 40%	40% or more
<b>Taiwan OEM</b>	25% to 40%				
<b>Korea Tier 2</b>	Very Low	<10%	10% to 25%	25% to 40%	



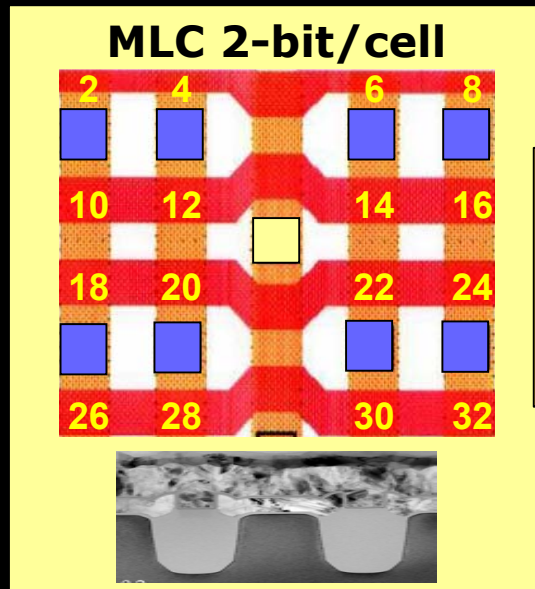
# 3 Step Leadership Strategy



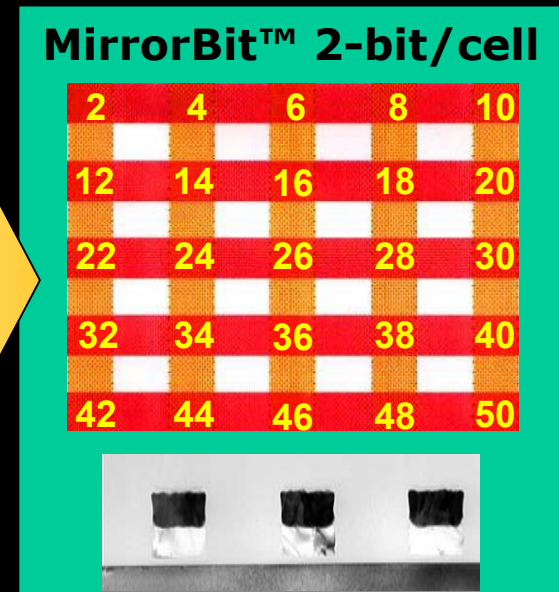
## 2. Achieve Technology Leadership

# High Performance Solutions

## MirrorBit™ vs. Best of Floating Gate NOR



- 40% Array Efficiency
- 30% Cost Efficiency



### High Performance - Low Power 1.8V Flash for Wireless Applications

#### 130nm MLC

85ns  
54MHz  
1  
50μA

#### 256Mbit

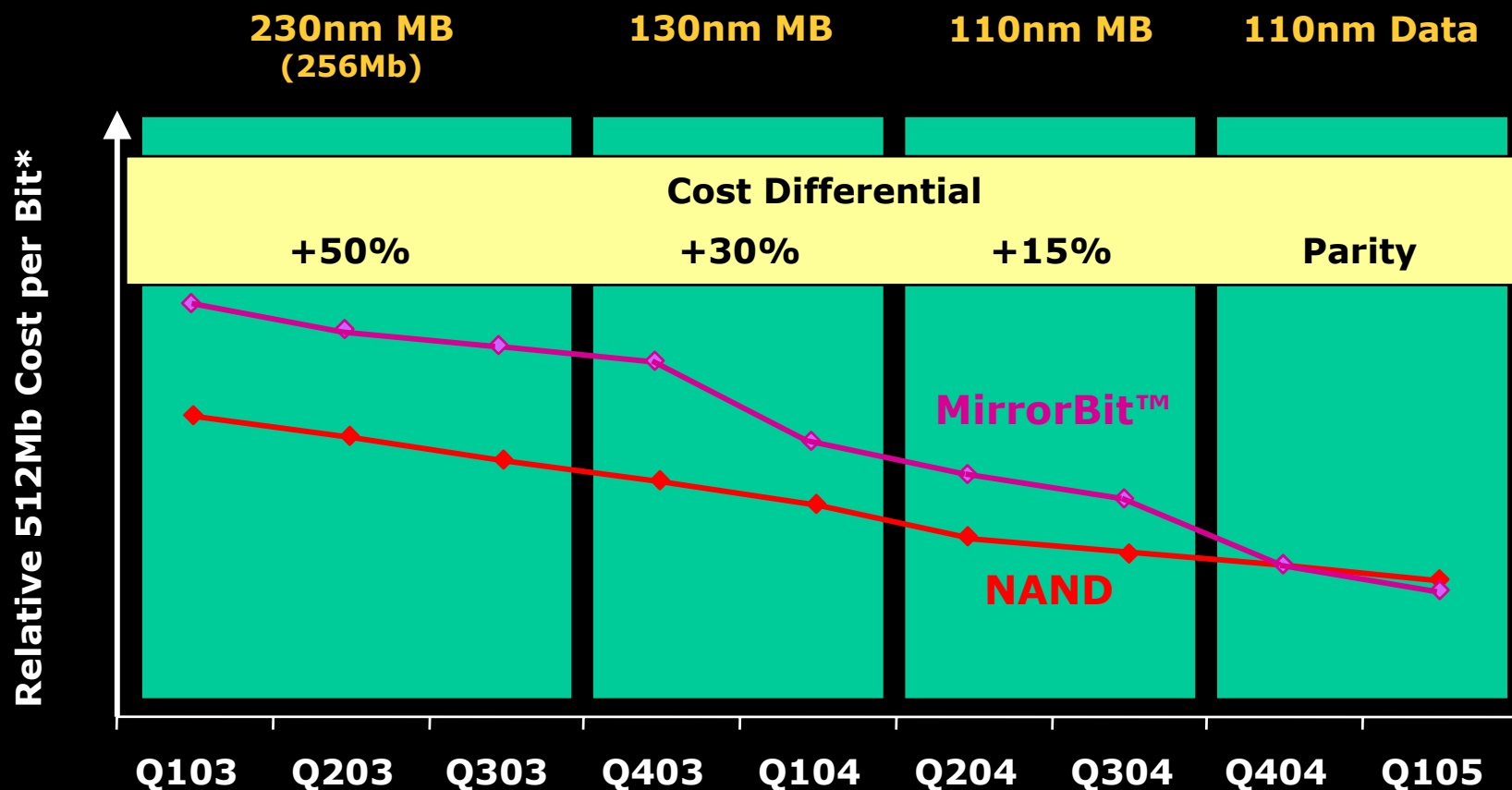
Access Time  
Burst Speed  
Relative Cost  
Standby Current

#### 110nm MirrorBit™

60ns  
>80MHz  
0.6  
20μA

# Data Storage Solutions

## MirrorBit™ vs. Best of NAND



\* Budgetary MirrorBit Data Pricing

# Changing the Rules

## MirrorBit™ vs. Floating Gate at Low Density



- Developing 200nm MirrorBit™ for depreciated factory
  - 16Mbit, 32Mbit, 64Mbit

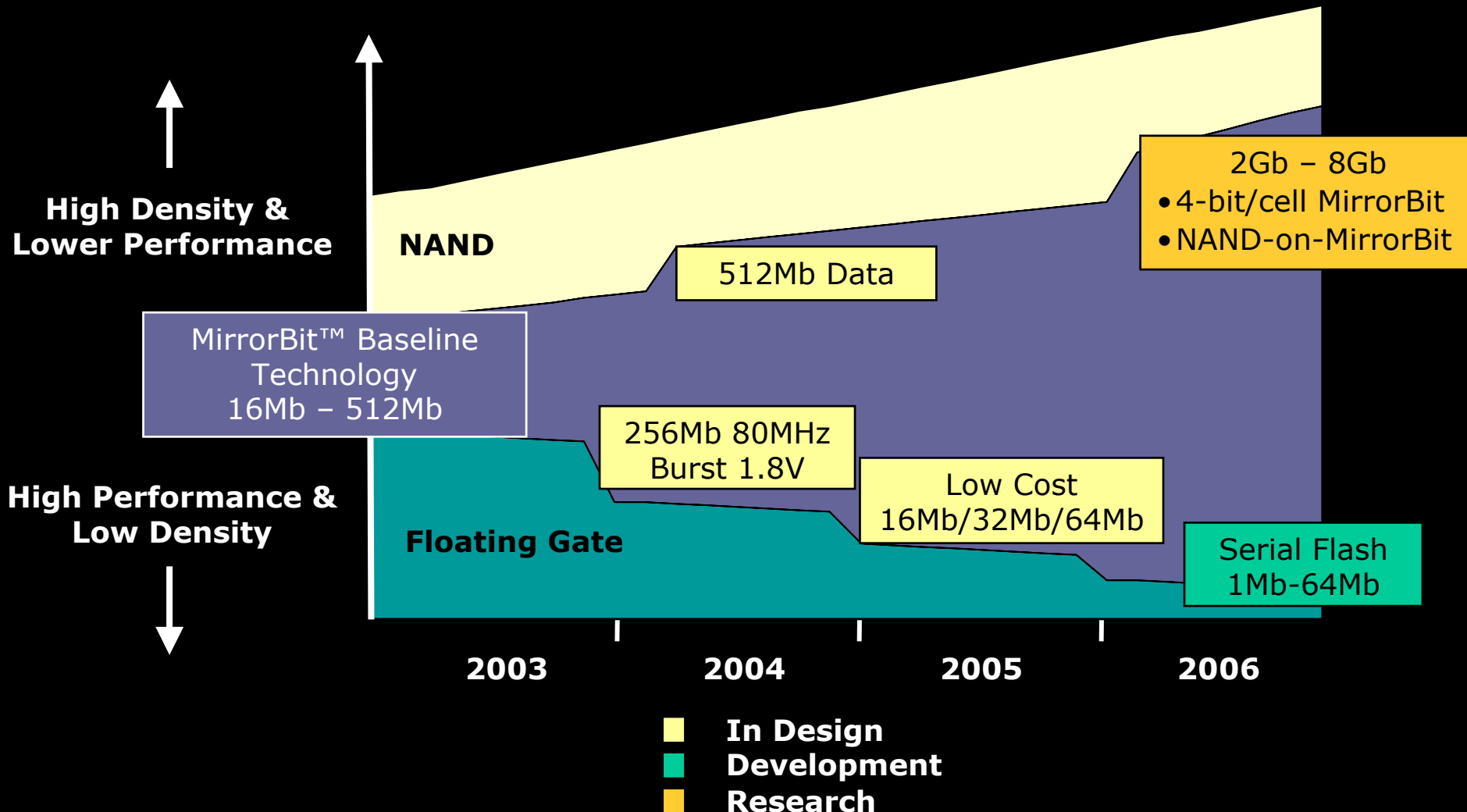
	Conventional FG			MirrorBit	
	<u>230nm</u>	<u>170nm</u>	<u>130nm</u>	<u>230nm</u>	<u>200nm</u>
Wafer Cost *	100%	160%	175%	<b>80%</b>	<b>80%</b>
32Mb NDW**	100	166	235	157	210
Die Cost**	<b>1.00</b>	<b>0.96</b>	<b>0.74</b>	<b>0.51</b>	<b>0.35</b>

\* Average 2004 cost assuming full utilization

\*\* Relative Comparison

- New doors open ...
  - Potential to Triple capacity of JV1/JV2
  - Serial Flash on MirrorBit™ technology

# MirrorBit™ : A Pervasive Technology



# 3 Step Leadership Strategy

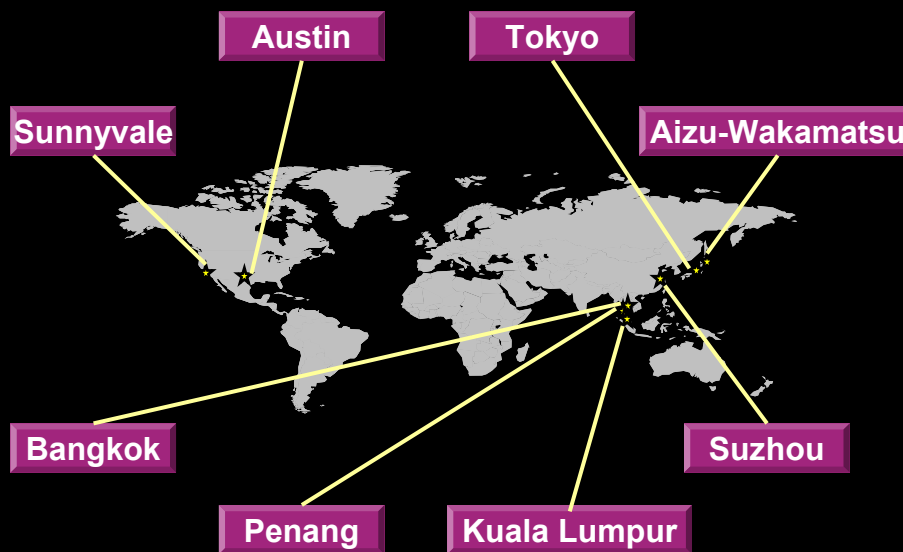


## **3. Drive Best in Class Manufacturing Cost**

# FASL LLC: Manufacturing Powerhouse



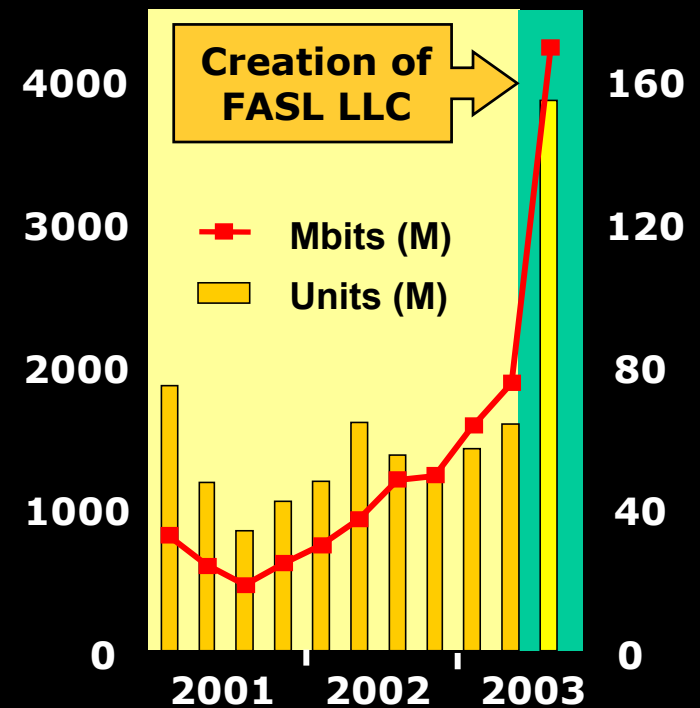
## World Wide Structure



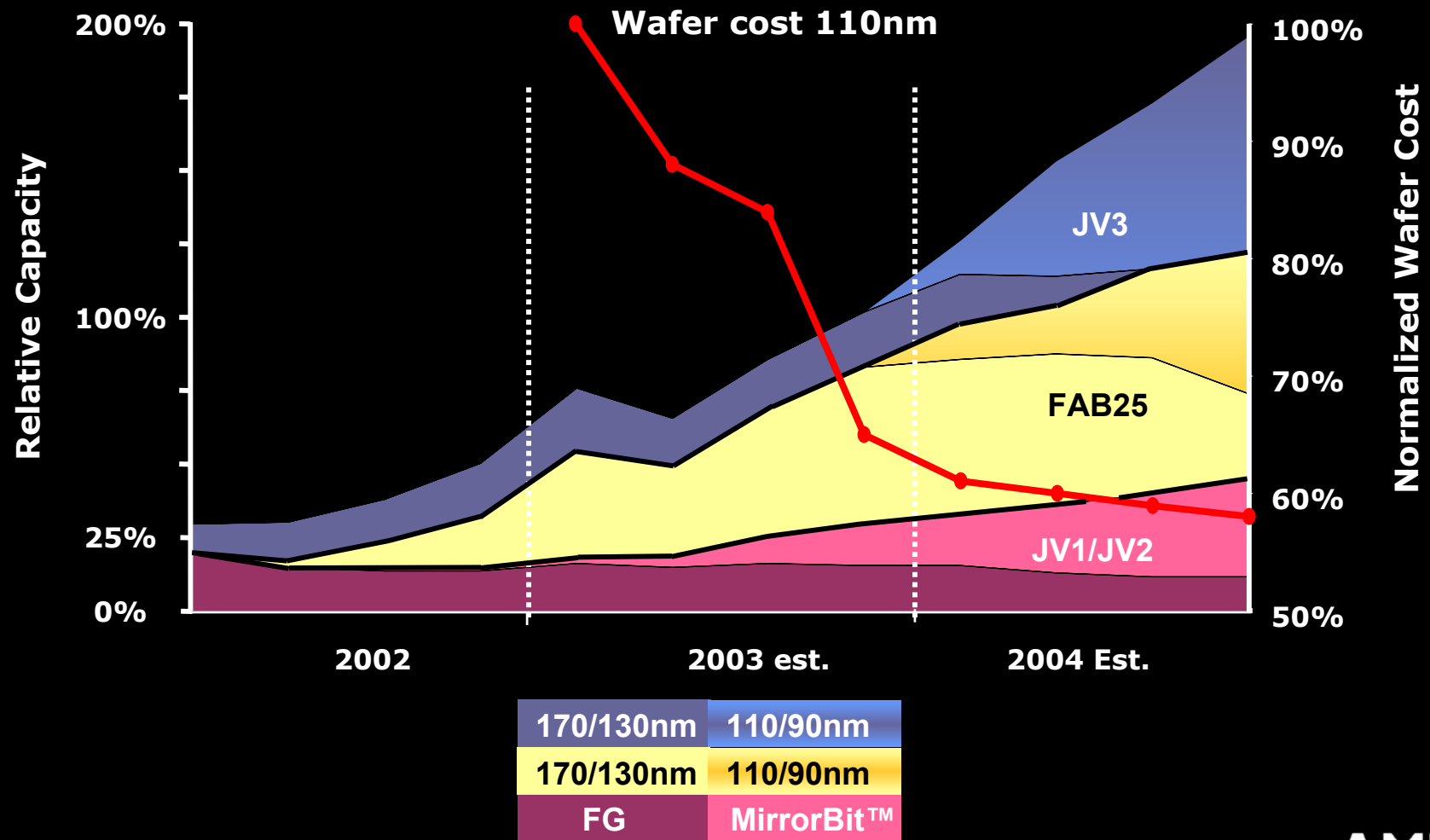
## World Wide Shipments

Mbits (M)

Units (M)



# Manufacturing Powerhouse in Motion



11/5/2003

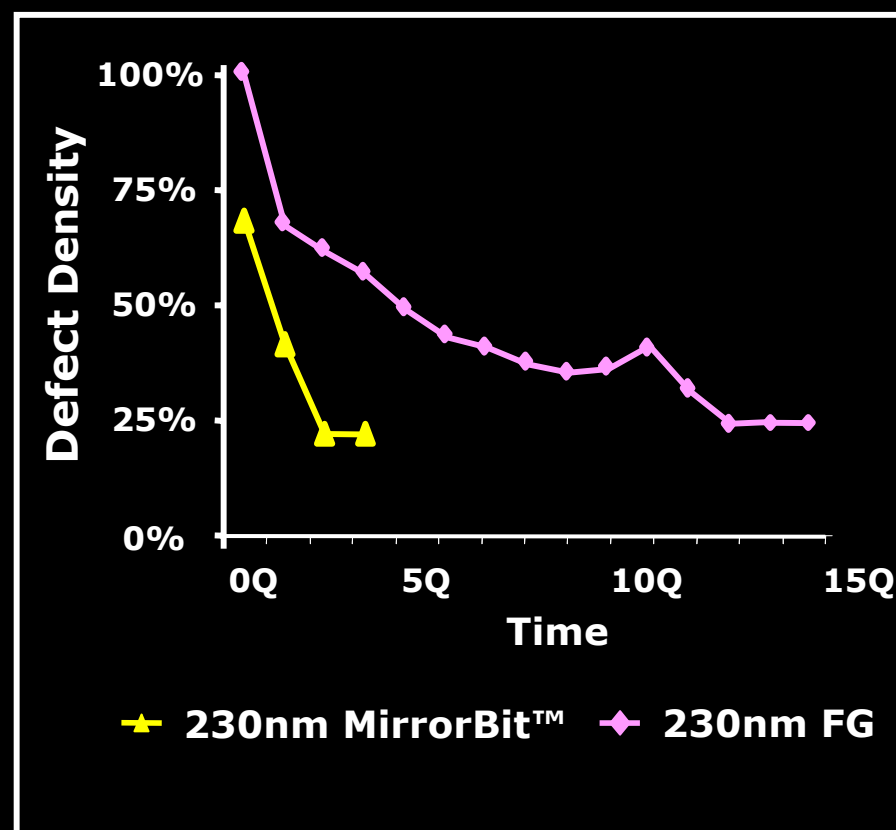
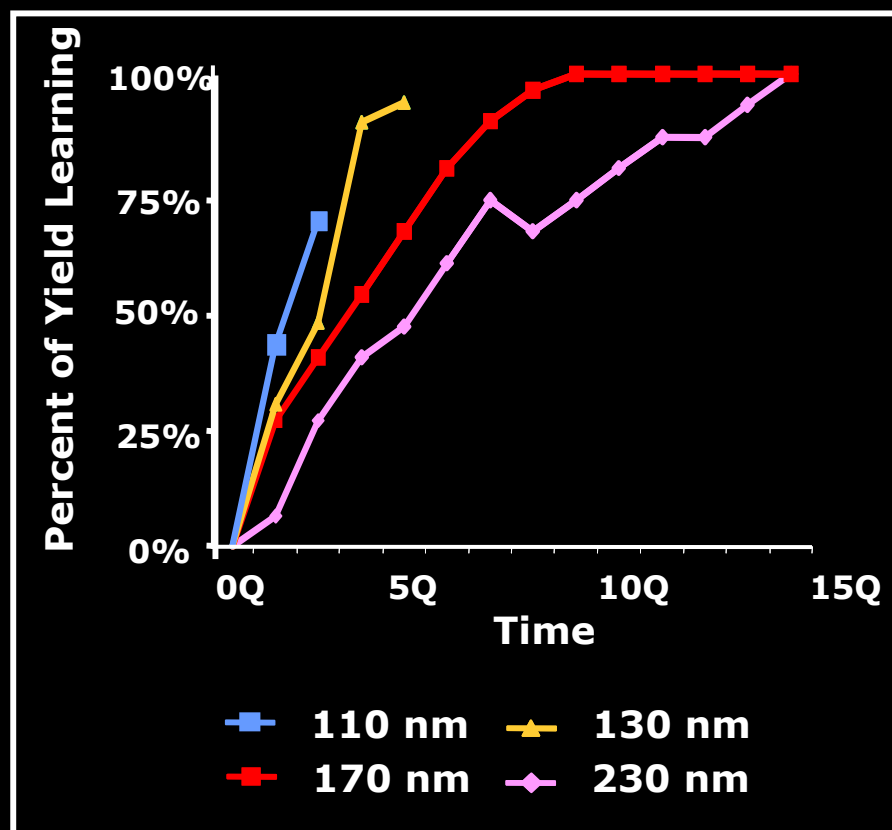
Source:- FASL 2003 estimates



# Accelerated Technology Transfer to Manufacturing



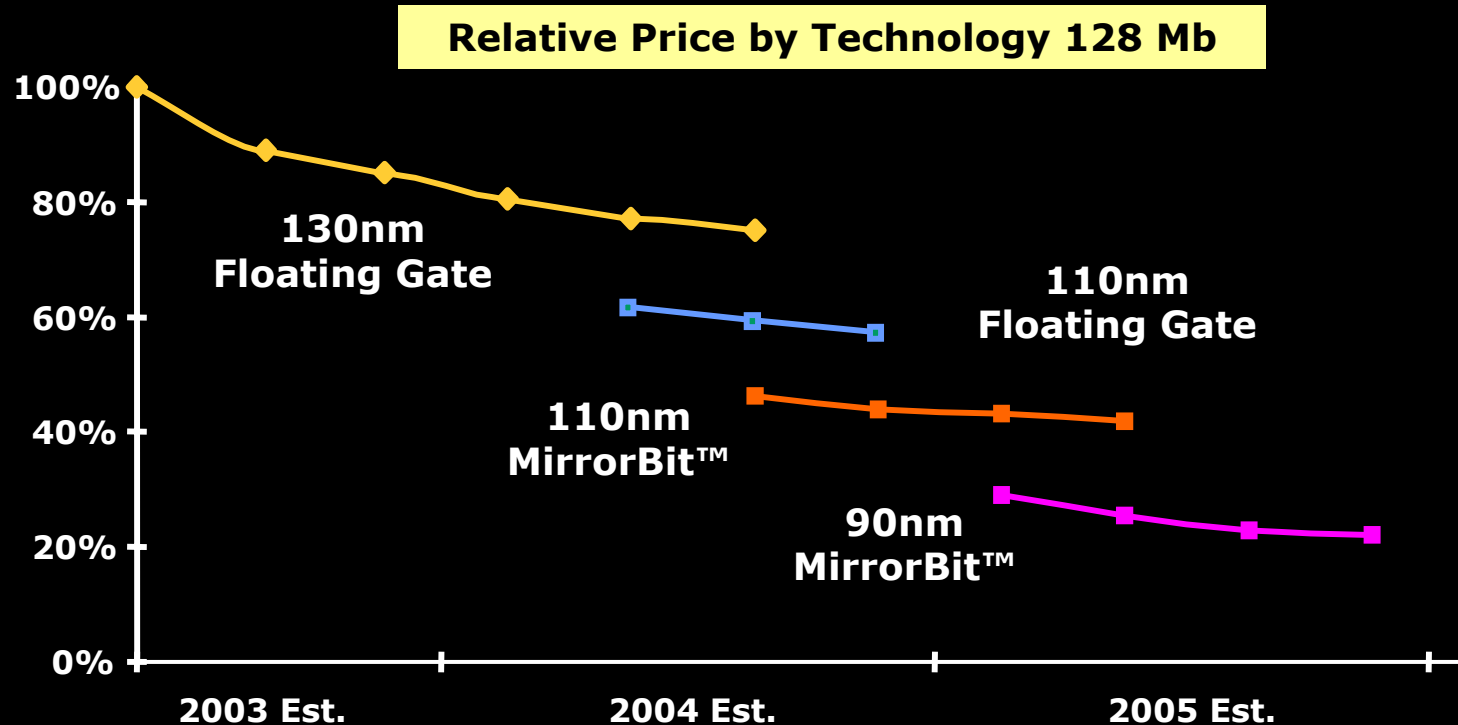
## Yield Learning Curve/Defect Density by Technology Node



# Focus on Aggressive Cost Reduction



- Lower Wafer Cost + High Yield + Small Die



- We are delivering on our 3-Step Strategy

- Creation of FASL completed on time
  - Industry leader in NOR
  - Leading the handset market
- MirrorBit™ deployed and winning
- Relentless cost reduction



- 2004 Objectives

- Leverage merged AMD & Fujitsu Flash business
- Near doubling of manufacturing capacity to support growth
- Accelerate MirrorBit deployment

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